

The European repo market at 2017 year-end

An ICMA ERCC briefing note

January 2018

Overview

The 2016 year-end¹ has provided an extreme benchmark by which future year-ends will be assessed, and, in relative terms, the 2017 year-end was mostly orderly. However, balance sheet pressures over the 'turn'² persisted, and core GC tightened significantly (more than 350bp in the case of German collateral), as did specials (by as much as 600 to 700bp in the case of some French government bonds). Meanwhile, compared to 2016, periphery sovereign markets traded relatively tighter, as did Gilt repo.

This short report uses market data and interviews with market participants (sell-side and buy-side) to provide a brief analysis of the 2017 turn, and the underlying factors that made it expensive and difficult, but not as extreme and disorderly as the previous year.

The lead-up

With the pain of the 2016 year-end still raw for many buy-side participants, focus on 2017 year-end funding requirements began as early as September. Perhaps not surprisingly, the turn was being priced-in (extrapolating the turn from the repo curve) more expensively than it had been a year earlier, with German GC implying levels around -3% (compared with around -2% at the same point for the 2016 turn), however, this was still much cheaper than the eventual extremes of the 2016 turn (where core GC printed around -8% in the interbank market). Even with a quarter to go, the general sentiment was that year-end would not be as bad as the previous year, and that compared to a year earlier there seemed to be more balance sheet being put to work in the repo market, with banks more willing to provide liquidity into the 2017 turn.

By the start of December, the turn was being priced more expensively, in the -4 to -5% region for German GC, and buy-side commentators suggest that, with the exception of rolls,³ it was becoming more difficult to find liquidity for directional⁴ repo trades over year-end. According to one fund manager, by the middle of December most dealers were only quoting over year-end for clips of €50mm (at the very low end of normal trade sizes), if at all, although it remained relatively easy to find prices for balance sheet neutral trades. Meanwhile, many in the market were watching the EUR-USD cross-currency basis, which had played a key role in driving rates substantially lower the previous year-end,

¹ See: ['Closed for business: a post-mortem of the European repo market break-down over the 2016 year-end'](#), ICMA, 2017

² The 2017 'turn' was 4 days, from December 29 2017 to January 2 2018.

³ A 'roll' is the rolling-over of an existing repo trade between the same counterparties.

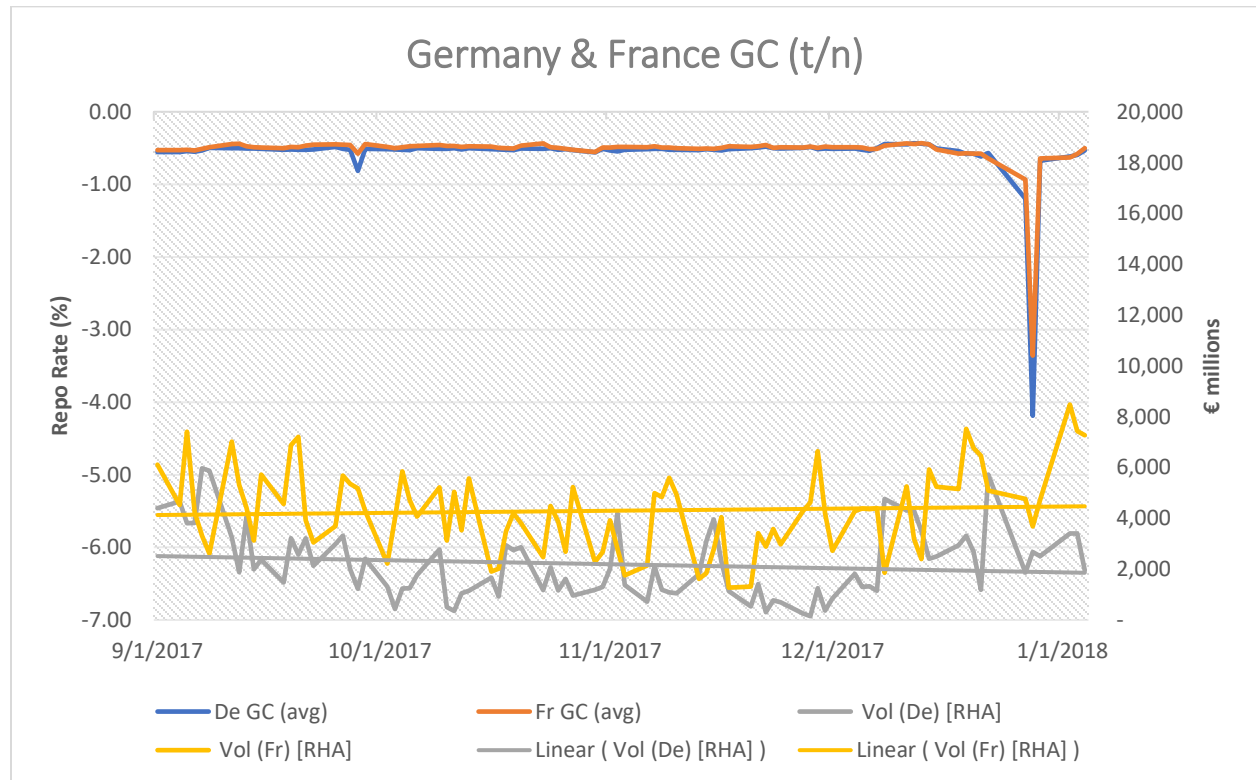
⁴ 'Directional' refers to trades that are either an outright borrow or loan of collateral, and so cannot be netted for balance sheet purposes against an opposite and matching trade.

and which, at the beginning of December, was beginning to see dollars edging relatively more expensive, potentially putting downward pressure on euro rates.

The turn: Euros

The actual year-end itself saw GC and specials levels tighten across the board, in particular for core sovereigns, but levels remained largely in line with where the turn had been priced in the forwards market. On BrokerTec,⁵ tom-next⁶ German GC on December 28 averaged -4.18% (compared to its usual clearing level of around -0.50/-0.55%) while French GC averaged -3.35% (compared with around the usual -0.45/-0.50%). Not only were the levels not as extreme as 2016 year-end levels, but dealers report that the market felt more orderly, with more trading, better supply, and a sense of market depth, with less of the ‘gapping’ that occurred in the previous year-end.

Figure 1: German and French GC



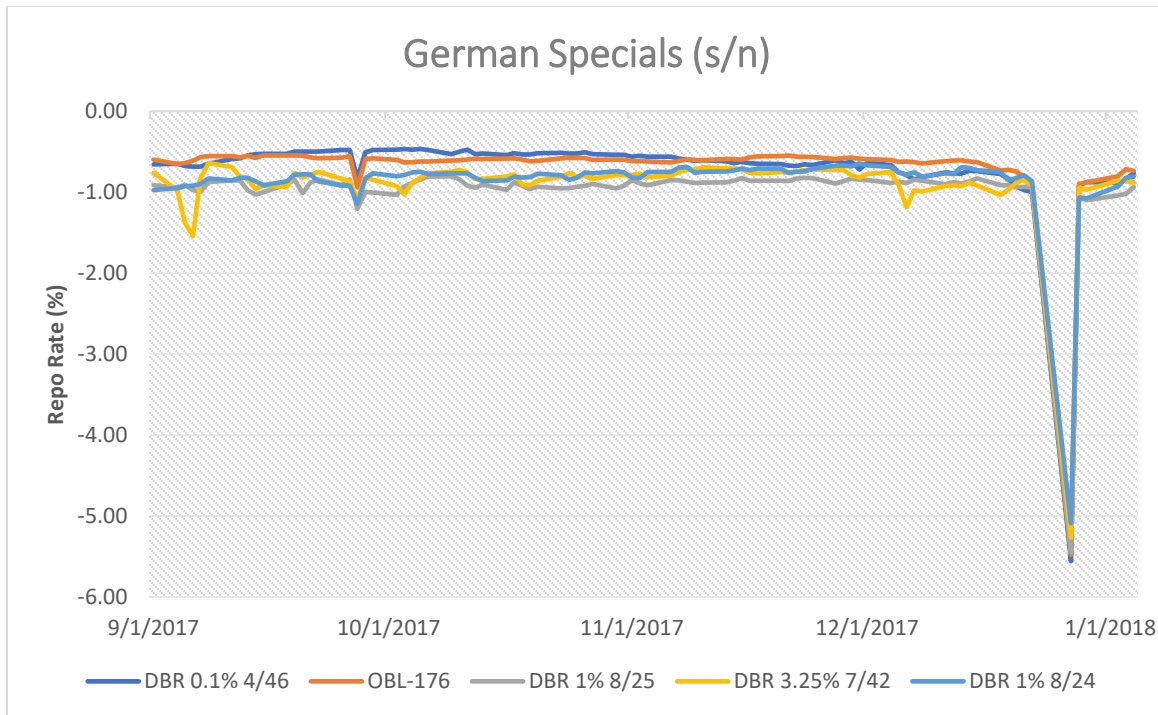
Source: Nex Data Services Ltd – BrokerTec Repo

⁵ BrokerTec, part of Nex Markets, is one of the main interbank repo trading platforms for European repo

⁶ Most one-day euro GC trades on a ‘tom-next basis’, i.e. for next day settlement

Core specials also tightened significantly, but again, not nearly as dramatically as at 2016 year-end, with the most expensive German specials trading around -5.00 to -5.50% for spot-next⁷ on December 27. Perhaps the biggest surprise, however, was a number of French specials (and not necessarily on-the-run or 'in play' bonds) trading very expensively, some in the -700bp to -800bp region.⁸

Figure 2: German specials



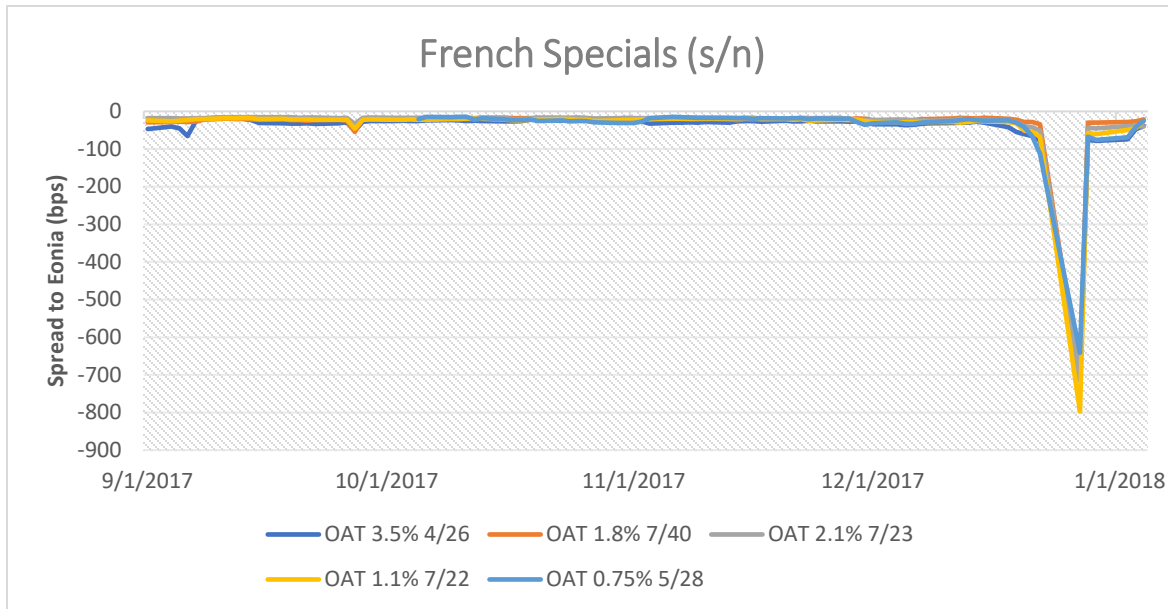
Source: Nex Data Services Ltd– BrokerTec Repo

What was also notable about the 2017 year-end, compared with 2016, was that this time the periphery repo markets also came under pressure. Again, it is relative, but Italian and Spanish GC tightened around 40 to 45bp. To put this into context, this degree of tightening is more than occurred at 2016 year-end.

⁷ Euro specifics or 'specials' tend to trade on a T+2 basis ('spot') in line with the underlying cash market

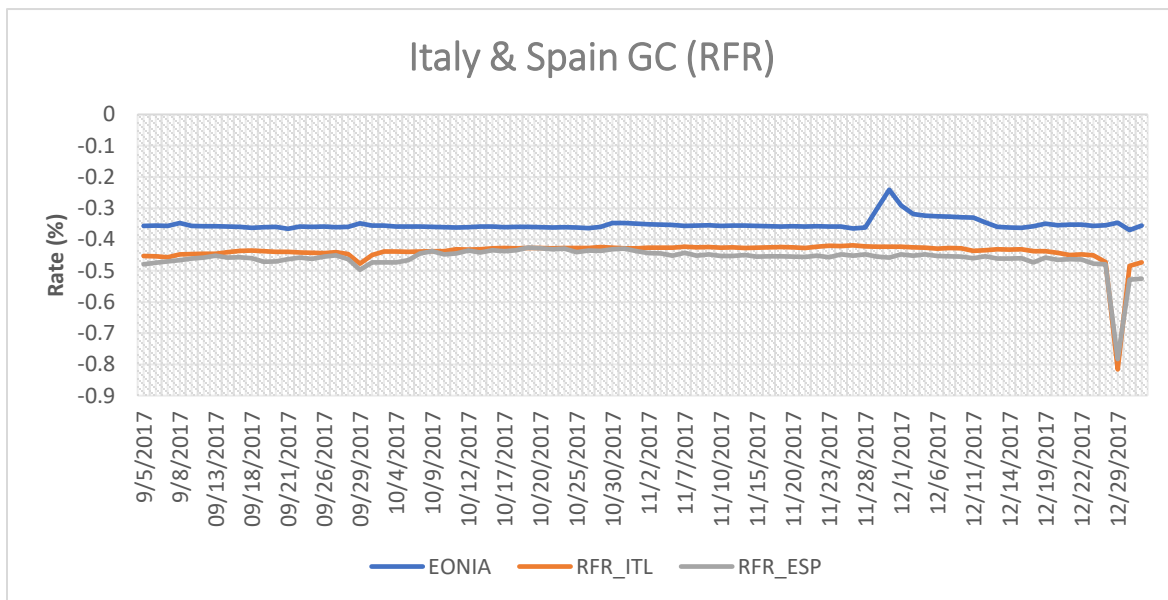
⁸ French specifics are mainly traded on a floating-rate basis as a spread to EONIA

Figure 3: French specials



Source: Nex Data Services Ltd – BrokerTec Repo

Figure 4: Italian and Spanish GC⁹

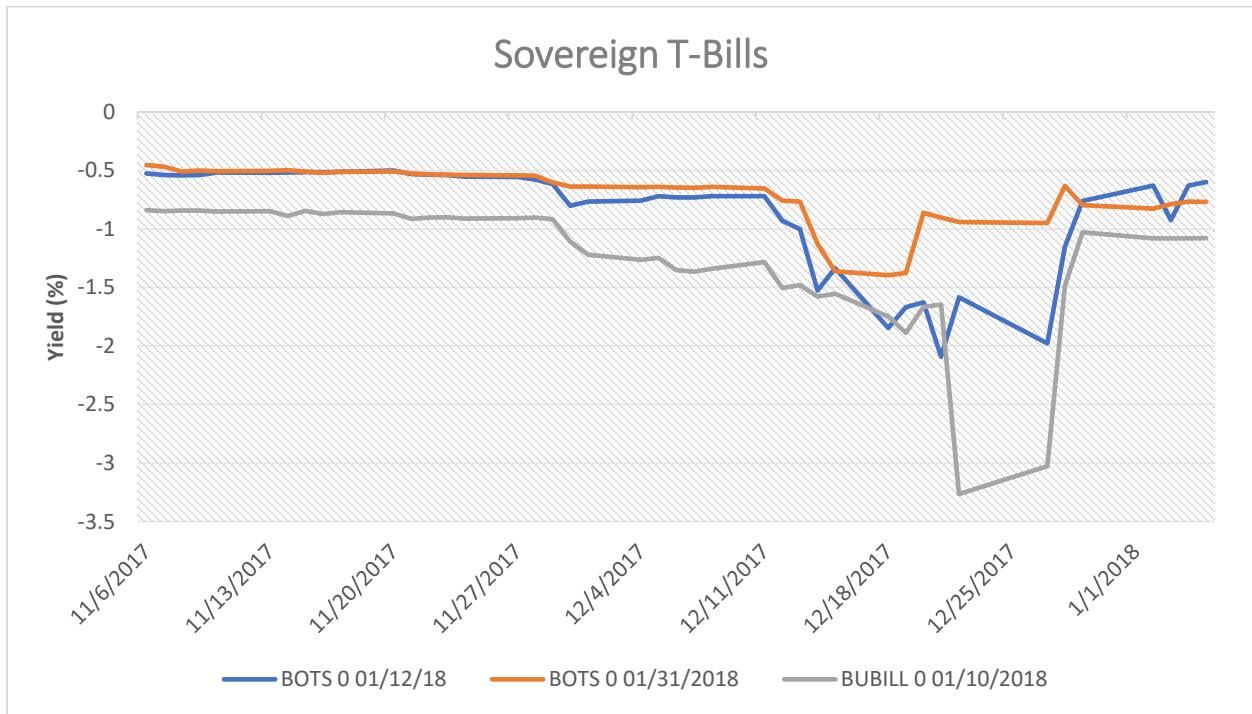


Source: Repo Funds Rate

⁹ The Repo Funds Rate (RFR) is a daily euro repo index calculated from trades executed on the BrokerTec and MTS electronic platforms. All eligible repo trades are centrally cleared and RFR Euro is calculated and published by Nex Data Services Limited. RFR Euro is calculated with repo trades that use sovereign government bonds issued by any country in the Eurozone.

Similar to 2016 year-end, as balance sheet became scarcer as year-end approached, the T-Bill market became the cash management instrument of choice, and yields, particularly for short-dated maturities, dipped significantly. Notably, however, it was not just core issuers (the January 2018 German Bubill printed below 3% just ahead of year-end), but there was also decent demand for Italian Bills, with the end-January BOT trading comfortably below 1% and the mid-January BOT printing below 2%.

Figure 5: Euro sovereign T-Bills



Source: Bloomberg

Why not as dramatic as 2016?

While the 2017 year-end saw significant tightening in euro repo and bill rates, it was clearly not as dramatic as the 2016 turn. This has been attributed to a number of factors.

Positioning

A number of respondents have noted that the short base in sovereign bonds, in particular Germany, was not as large as that going into the 2016 year-end. On a relative value basis, bonds were relatively cheap to futures (illustrated by the cheapness of the implied repo of the Eurex contracts – see Figure 6), and any funds that were running shorts into year-end were happy to pay-up early to lock in their repo for term, rather than risk rolling day-to-day.

Figure 6: March Bund contract CTD basis¹⁰



Source: Bloomberg

PSPP Lending facilities

One of the notable changes since the end of 2016 is the improvement in the various ECB and national central bank (NCB) lending facilities, which has made it easier, and more incentivized, for banks to borrow bonds bought up in the Public Sector Purchase Programme (PSPP). In particular, a number of market participants have commented on the improved accessibility of the Bundesbank’s lending facility. While total borrowing levels had remained relatively stable in the lead-up to year-end (see Figure 7), it has been suggested that the December numbers, when published later in January 2018, should see a large increase, and most likely being driven by increased borrowing of German and French bonds. In fact, one dealer commented that the main market issue with the lending facilities is the counterparty credit lines of the NCBs, in particular the Bundesbank and Banque de France, and that this is potentially becoming the main constraint to utilizing the facility. It has been suggested that credit line constraints could have been one of the contributing factors that saw French specials tighten so aggressively.

FX Basis

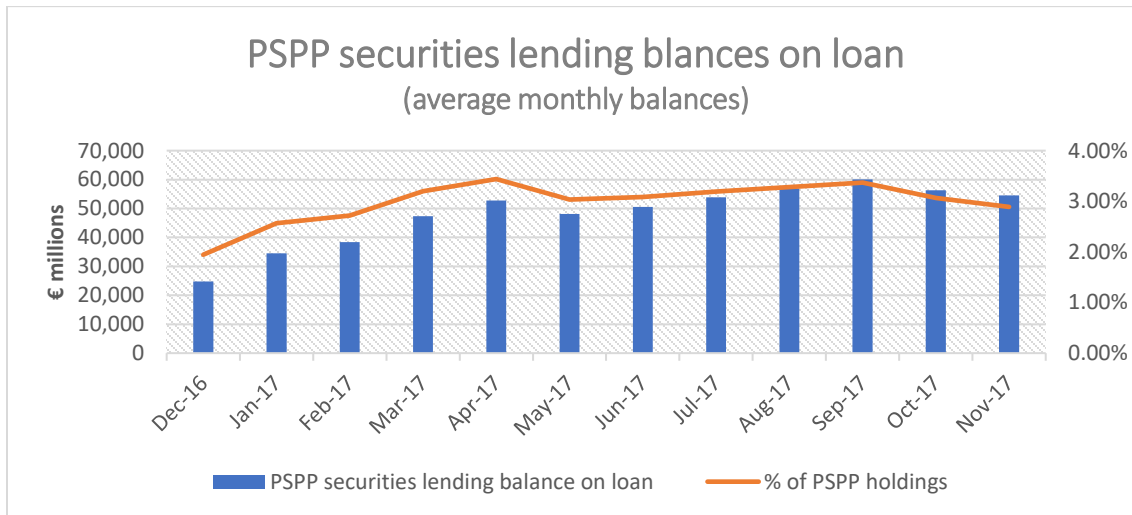
One of the main drivers of the extreme rates observed in the euro repo market at 2016 year-end was the EUR-USD cross-currency basis, which saw a significant richening of USD compared to EUR as Europe based banks found themselves long excess EUR and short USD.¹¹ Leading into 2017 year-end, the basis

¹⁰ The bottom left hand panel shows the implied repo from holding the cheapest to deliver bond to delivery (yellow line). While the implied rate tightened a little into year-end, before cheapening, it remained relatively close to the actual market repo rate, suggesting that cash bonds were fairly priced relative to the futures market.

¹¹ Interest rate parity theory suggests that the foreign exchange forwards markets will always ensure that the relative LIBOR cost of borrowing in any currency will be the same. However, it can often be cheaper to borrow in one currency through the FX forwards. The currency basis swap reflects this relative disparity. Basis swaps are

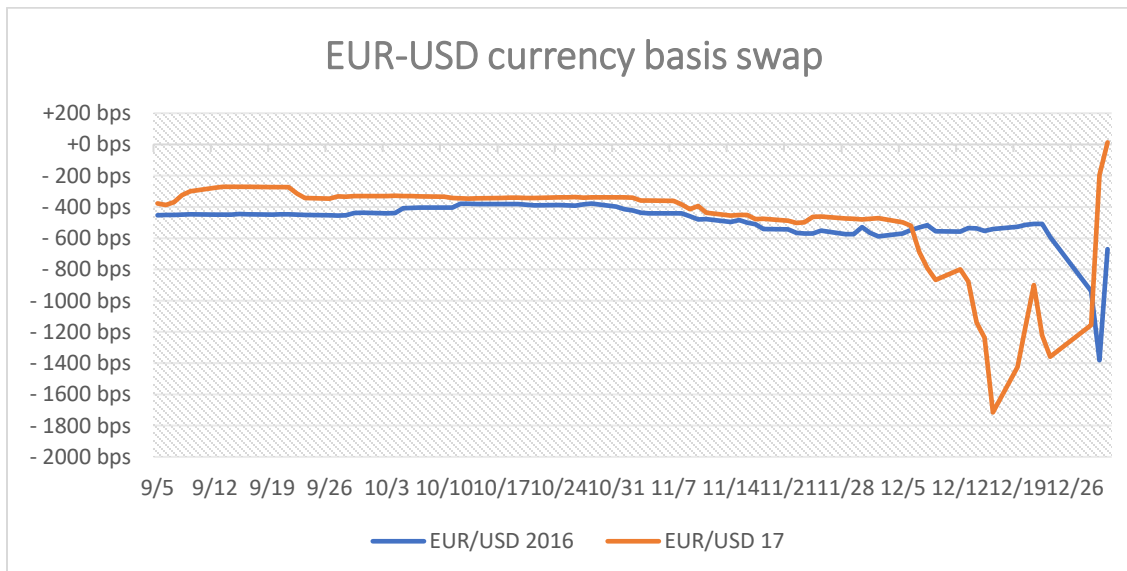
began to move progressively lower, even more so than in 2016 (see Figure 8). However, a number of respondents commented that this time EUR funding rates exhibited a much lower beta to this USD richening, perhaps helped by other factors such as the improved NCB lending facilities and greater balance sheet capacity. Furthermore, having reached a low point of almost -20%, the basis reverted aggressively, reestablishing parity on December 31. This was most likely due to a last-minute supply of USD coming from banks, which abated the potential for any further pressure going into the turn.

Figure 7: PSPP lending balances



Source: ECB

Figure 8: EUR-USD cross-currency basis



Source: Reuters

usually expressed as one currency against the USD, and a negative basis suggests a relative cheapness to borrow in that currency with respect to USD.

Preparedness

One of the key factors that helped to ensure that the 2017 year-end was not as extreme or as disorderly as the 2016 turn seems to be the fact that market participants were more aware of the potential for market dislocations as dealer banks predictably closed their books, and so better prepared. It is reported that firms began to focus on their potential year-end fund needs as early as September and October, and, where possible, paid-up to lock-in for term over year-end, rather than rolling day-to-day. Meanwhile, it has been suggested that this time many buy-side holders of bonds had been reluctant to lend too far in advance of year-end, fearing that they would miss the potential exaggerated lending levels of the previous year, which in turn meant that there was more supply as year-end approached.

Still closed for business

As one dealer participant aptly and poetically put it, year-end is the altar on which balance sheet is routinely sacrificed. However, the underlying reasons are more prosaic and regulatory based. Firstly, many European banks report their Basel ratios on a quarter-end basis using monthly averages (as opposed to applying daily averages), and so it is normal to reduce balance sheet at quarter-end, particularly with respect to Leverage Ratio management. This has also been suggested as one of the reasons why French specials became so difficult, compared to the less domestically centered German market. Secondly, a number of European jurisdictions apply a bank levy calculated on a snap-shot of year-end balance sheet liabilities. Thirdly, large US banks are subject to a G-SIB capital surcharge on short-term wholesale funding. The methodology is complex, but balance sheet liabilities at year-end, in particular FX and repo positions, are a critical factor in determining banks' G-SIB score. With respect to all of these reporting frameworks, it is not feasible for banks to adjust repo pricing for a three-to-four-day repo to a level that would offset the costs of increasing balance sheet over these critical reporting dates. Finally, it has been pointed out that in many cases there is little or no incentive for repo desks to trade actively in the final days of the year, particularly as they too are likely to struggle to source liquidity.

Despite improvements in the accessibility of the NCB lending facilities, and increased buy-side supply of collateral, repo is an intermediated market that relies on banks' balance sheet.¹² When banks close their trading books in order to reduce balance sheet, the market effectively ceases to function. A number of contributors pointed out that this has always been the case, and year-end is traditionally a challenging time for short-term funding markets. However, the nature of year-ends is changing as a result of recent regulatory initiatives and monetary policy. Historically, rates would spike over the turn, as banks scrambled for funding. In the new paradigm, where cash is in abundance and 'collateral is king', it is buy-side firms scrambling for collateral that drives year-end pressures, with the reduction in intermediation capacity making the market ever more susceptible to extreme dislocations. This also raises uncertainties as to how year-ends will pan-out post-QE and with the normalization of monetary policy.

¹² See speech by Benoît Cœuré, at the ERCC General Meeting on "[The repo market: market conditions and operational challenges](#)", Brussels, 14 November 2017

That said, it has been suggested that a number of banks did make some balance sheet room for their repo and short-end businesses over the turn, encouraged by the sizeable profits that were there for the taking at 2016 year-end. This may also go some way to explaining the eventual sharp reversal in the cross-currency basis. However, it is clear that most banks did not have this 'wobble room', and a number of repo market users still struggled to find liquidity over the turn.

Fails

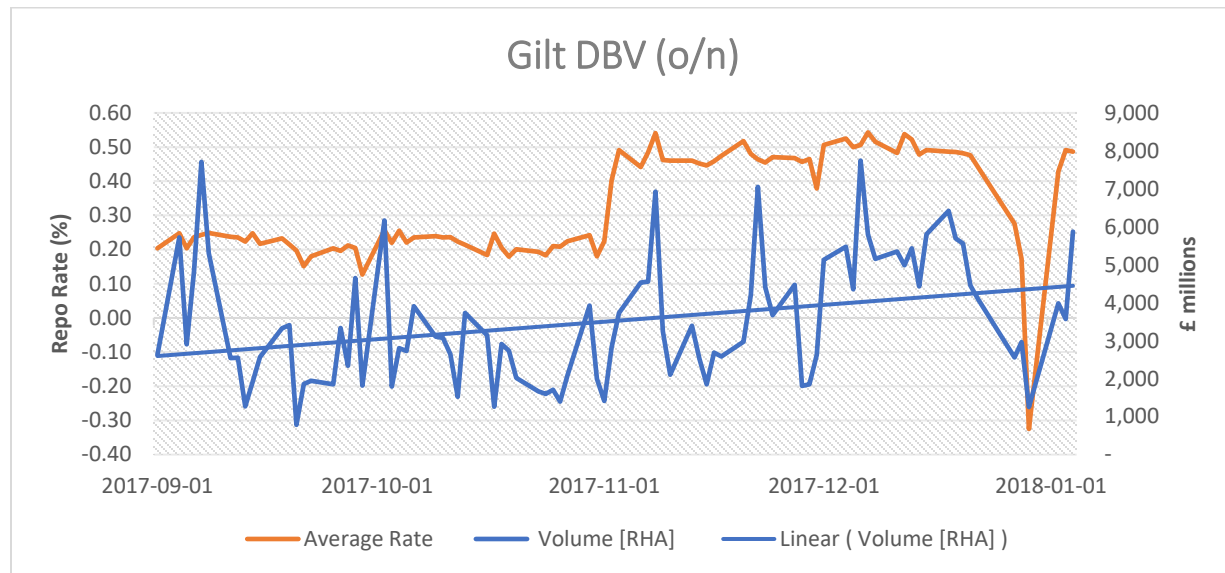
A good barometer of market stress is often the extent to which trades fail to settle (the 'fails rate'). European bond markets have a high level of settlement efficiency, and fails are generally the result of the inability to source securities, rather than a willingness to fail. In other words, fails rates in the European fixed income markets are not so much evidence of market abuse, but rather are symptomatic of market disfunction. Unfortunately, settlement data is not readily available in Europe, however, anecdotally at least, it would at least seem that there was no noticeable increase in fails rates over the 2017 year-end, and that from a settlement perspective the market functioned normally.

The turn: sterling

While the deviation of sterling GC and specials rates from the norm were not as extreme as core euro rates, at least in absolute terms, it is worth noting that the market nonetheless tightened significantly over year-end, printing new lows for recent turns. Market participants report that the Gilt repo became thin going into year-end, with wide bid-asks and low trading volumes, which exacerbated trading levels. The low print for overnight Index-Linked Gilt DBV¹³ on December 29 was -0.90% (an historic low), while the weighted-average DBV level was -0.325%, around 80bp tighter than normal. However, the tightness was relatively short-lived, and once dealers had squared their books for the turn, the market quickly normalized.

¹³ DBV ('Delivery By Value') repo is a mechanism whereby a Crest/Central Gilts Office (CGO) settlement system member may borrow from or lend funds to another CGO member against overnight gilt collateral. The CGO system automatically selects and delivers securities to a specified aggregate value on the basis of the previous night's CGO reference prices. Givers and takers of collateral can specify the classes of security included in the DBV.

Figure 9: Gilt GC



Source: Nex Data Services Ltd – BrokerTec Repo

Conclusion

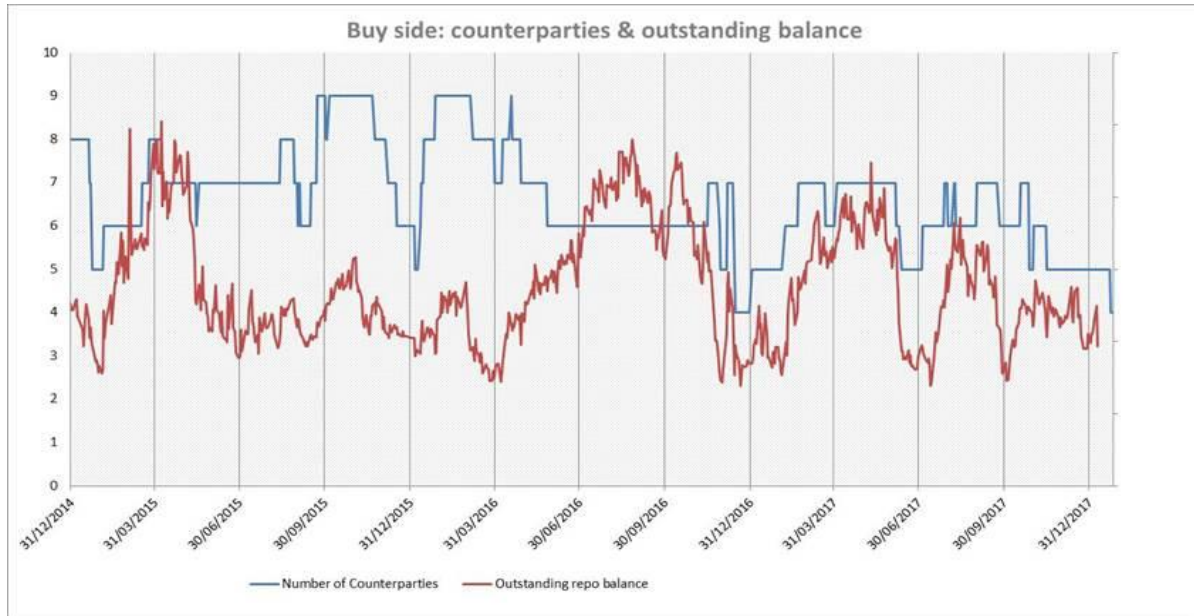
While the 2017 year-end for the European repo market was not as extreme or disorderly as the 2016 year-end, it was nonetheless significant, with an acute tightening of core euro GC and specials, and new lows for euro peripheries and sterling. The reasons for the 2017 being relatively less tumultuous than the previous year can be attributed to market positioning (fewer open shorts in sovereign bonds), improved PSPP lending facilities, a break-down in the correlation between repo rates and the cross-currency basis (which also normalized at the last minute), and, quite simply, greater awareness and better preparedness.

While there also appeared to be more bank balance sheet committed to the repo market during 2017, with improved netting efficiency and increased profitability, which certainly helped in the long-term run-up to year-end, the now standard balance sheet snap at the end-of December was again in full evidence. Regulatory reporting continues to be the driving factor, with banks across various jurisdictions being impacted by Basel (in particular Leverage Ratio) reporting requirements, national bank levies, and the US G-SIB capital surcharge.

The 2017 year-end, as with the previous year-end, serves as a reminder that the European repo and collateral markets are innately dependent on bank intermediation to function effectively, and that regulatory pressures on banks' balance sheets directly impact repo market liquidity. Whilst not as disorderly as the previous year, and with the market better prepared (and better positioned), many repo market users still struggled to find liquidity going into the final days of the year, as evidenced by the now customary year-end scramble for T-bills (see Figure 5). This annual quasi-closure of the repo market is particularly problematic for buy-side firms that need to manage their cash and collateral on a day-to-day basis (such as pension or insurance funds) or UCITS money funds that are legally limited to seven-day

term investments. This drop-off in intermediated liquidity is further highlighted by Figure 10, which shows the number of bank repo counterparties of a large buy-side fund, as well as (relative) repo balances, both of which routinely reduce around quarter-end and year-end reporting dates.

Figure 10: Example of a buy-side firm’s bank repo counterparties and balances



The 2017 year-end, though not as dramatic as 2016, continues to highlight the vulnerabilities of a market that is dependent on banks’ balance sheets, and that remains highly sensitive to regulation. It also needs to be remembered that year-end is a predictable and broadly anticipated event, for which the market can prepare itself. It therefore remains an open question going forward as to how the repo and collateral markets would respond in the face of an unexpected shock.

Acronyms:

bp	Basis Point (100 th of a %)
BOT	Buoni Ordinari del Tesoro (Italian T-bill)
CGO	Central Gilts Office
DBV	Delivery By Value
ECB	European Central Bank
EONIA	European OverNight Index Average
ERCC	European Repo and Collateral Council
GC	General Collateral
G-SIB	Global Systematically Important Bank
ICMA	International Capital Market Association
mm	millions ('000,000)
NCB	National Central Bank
OAT	Obligations Assimilables du Tresor (French government bond)
O/N	Overnight-Next
PSPP	Public Sector Purchase Programme
QE	Quantitative Easing
RFR	Repo Funds Rate
S/N	Spot-Next
T/N	Tom-Next
UCITS	Undertakings for Collective Investment in Transferable Securities

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ICMA European Repo and Collateral Council (ERCC)

Since the early 1990's, ICMA has played a significant role in promoting the interests and activities of the international repo market, and of the product itself.

The ICMA European Repo Council (ERC) was established in December 1999, to represent the cross-border repo market in Europe. It has become the industry representative body that develops consensus solutions to issues arising in a rapidly evolving marketplace, consolidating and [codifying best market practice](#). The Council's on-going efforts to establish a robust infrastructure to underpin the European repo market include the development of the [Global Master Repurchase Agreement \(GMRA\)](#) and the publication of the [ICMA ERC Guide to Best Practice in the European Repo Market](#) – a document which is periodically amended as warranted by evolution in the agreed understanding of best practice. The Council also plays a significant role in nurturing the development of the repo market and supporting its wider use in Europe by providing educational courses and market information, such as the [bi-annual survey of the European repo market](#) which has become established over the past decade as the only authoritative indicator of market size and structure and the dominant trends.

On 4 December 2015, ICMA's board decided to change the name of the European Repo Council (ERC) to the European Repo and Collateral Council (ERCC). This change was made in order to recognise the increasingly intimate relationship between repo and collateral and the substantial focus of the ERC on collateral. The repo market is the main means by which collateral is sourced, priced and circulated. Repo desks are increasingly regarded as collateral desks. Moreover, since the financial crisis of 2007, the importance of collateral has grown significantly and the ERC has increasingly focused its efforts on working with the authorities to create an efficient collateral market. While the name change is not expected to presage a dramatic shift in the nature or role of the ICMA ERCC, it will serve to sharpen the focus of the ICMA ERCC on collateral and will also help to ensure that there is recognition in the official sector, and amongst the public, of the ERCC's mandate to work on collateral. The ERCC's work will continue as today, but over time new groups of member representatives may be formed to more directly tackle applicable collateral topics and challenges.

Membership of the ERCC is open to ICMA members who transact repo business in Europe. For more information contact: ercc@icmagroup.org